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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,575	08/07/2003	Takahiro Ishizuka	FSF-03521	8297

37398 7590 03/28/2005  
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EXAMINER

KLEMANSKI, HELENE G

ART UNIT PAPER NUMBER

1755

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/635,575

Applicant(s)

ISHIZUKA ET AL.

Examiner

Helene Klemanski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/7/03&2/23/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

1. Claims 1, 2, 10-12 and 20 are objected to because of the following informalities: in claims 10 and 20 there is no period at the end of the claims. Appropriate correction is required.

The following phrases are also being objected to because of the following reasons:

(1) in claim 1, line 2, the phrase "including an oil-soluble dye; a hydrophilic organic solvent; and a fluorine type surfactant other than a perfluoroalkylsulfonic acid or derivatives thereof";

(2) in claim 2, the first line after the formula (M-I), the phrase "including a five-membered hetero ring";

(3) in claim 11, line 3, the phrase "including an oil-soluble dye; a hydrophilic organic solvent; and a fluorine type surfactant other than a perfluoroalkylsulfonic acid or derivatives thereof" and

(4) in claim 12, the first line after the formula (M-I), the phrase "including a five-membered hetero ring".

Applicants should note that the terms "preferably", "more preferably", "such as" and "including" and the phrases that follow them do not further limit the claims. For example, in claim 1, it is the examiner's position that the ink composition comprises a color microparticle dispersion and the remaining terms after the term "including" does not extend the scope of that claim. The examiner suggests replacing the term

"including" with the term "comprising" in claims 1 and 11 and deleting the phrase "a substituent including" in claims 2 and 12 to overcome this objection.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 4, 5, 11, 14 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 4, 5, 11, 14 and 15, applicants uses the term "type" appended to an otherwise definite phrase (i.e. fluorine type surfactant). It is the examiner's opinion that the word type does not further define the term. The examiner suggests deleting the term "type".

In claim 11, the term "using" is indefinite. A "process" defined in the sole terms of "using" does not define patentable subject matter under 35 USC 101. See *In re Fong*, 129 U.S.P.Q. 264 (CCPA 1961). The examiner suggests incorporating the ink jet method as disclosed on pages 104-105 of the specification to overcome this rejection.

### ***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA

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1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 4, 9, 12, 13, 15, 16 and 18 of copending Application No. 10/622,746 (US 2004/0138335). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the present application overlap said patent claims and would be obvious thereby.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

6. Claims 1-6 and 11-16 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4, 6 and 7 of U.S. Patent No. 6,835,240. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the present application overlap said patent claims and would be obvious thereby.

#### ***Claim Rejections - 35 USC § 103***

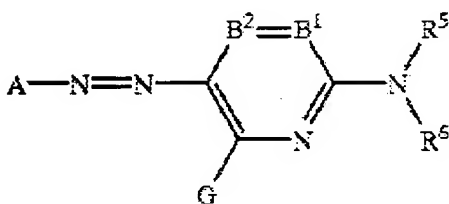
7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-3, 5, 6, 11-13, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishita et al.

Nishita et al. teach an ink jet ink composition comprising dissolving or dispersing, in an aqueous medium, an azo dye of the formula

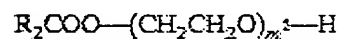


wherein A represents a 5-membered heterocyclic ring; B<sup>1</sup> represents =CR<sup>1</sup>- and B<sup>2</sup> represents -CR<sup>2</sup>=, or one represents a N atom and the other represents =CR<sup>1</sup>- or -CR<sup>2</sup>=; R<sup>5</sup> and R<sup>6</sup> represent H, aliphatic groups, aromatic groups, heterocyclic groups, acyl groups, alkoxycarbonyl groups, aryloxy carbonyl groups, carbamoyl groups, alkylsulfonyl groups, arylsulfonyl groups or sulfamoyl groups; G, R<sup>1</sup> and R<sup>2</sup> each independently represent H, halogen atoms, aliphatic groups, aromatic groups, heterocyclic groups, cyano groups, carboxyl groups, carbamoyl groups, alkoxycarbonyl groups, aryloxy carbonyl groups, acyl groups, hydroxy groups, alkoxy groups, aryloxy groups, amino groups substituted by alkyl, aryl or heterocyclic groups, alkylsulfonyl groups, arylsulfonyl groups etc. and 0.001-15% by mass of a surfactant such as a surfactant of the formula



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wherein  $R_1$  represents a  $C_{5-40}$  alkyl group which may be substituted with halogen atoms or the formula



wherein  $R_2$  represents a  $C_{5-40}$  alkyl group which may be substituted with halogen atoms.

The aqueous medium is obtained by adding an additive such as a humectant, stabilizer and/or antiseptic to water or a mixture of water and a water-soluble organic solvent.

When the azo dye is an oil-soluble dye, the ink can be prepared by dissolving the oil-soluble dye in a high-boiling-point organic solvent to form a solution and then dispersing and emulsifying the resulting solution in the aqueous medium. Nishita et al. further teach an ink jet recording method comprising ejecting the above ink composition onto a recording medium. See col. 2, lines 1-67, col. 3, line 15 – col. 4, line 20, col. 8, lines 39-67, Tables 1-13, col. 35, lines 35-67, col. 36, lines 35-39, col. 38, lines 1-10, col. 39, lines 43-55, col. 40, lines 17-20 and claims 1-4, 6 and 7. Nishita et al. fail to specifically exemplify the use of a fluorine surfactant as claimed by applicants.

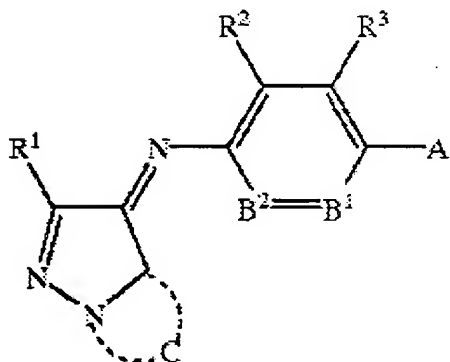
Therefore, it would have been obvious to one having ordinary skill in the art to use the specific fluorine surfactant as claimed by applicants as Nishita et al. also discloses the use of these surfactants but fails to show an example incorporating them.

9. Claims 1-9 and 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishizuka et al. (US 2001/0023267) in view of Yatake et al. (US 2003/0106462).

Ishizuka et al. teach an ink jet ink composition comprising a coloring composition containing coloring particles dispersed in an aqueous medium such as a mixture of

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water and a water-soluble organic solvent. The coloring particles comprise an oil soluble dye of the formula



wherein  $R^1$  represents H, an aliphatic group, an aromatic group, a heterocyclic group, a cyano group etc.; A represents  $-NR^4R^5$  or a hydroxyl group;  $R^4$  and  $R^5$  each independently represent H, an aliphatic group, an aromatic group or a heterocyclic group;  $B^1$  represents  $=C(R^6)-$  or  $=N-$ ;  $B^2$  represents  $-C(R^7)=$  or  $-N=$ ;  $R^2$ ,  $R^3$ ,  $R^6$  and  $R^7$  each independently represent H, a halogen atom, H, an aliphatic group, an aromatic group, a heterocyclic group, etc and C forms a 5- or 6-membered nitrogen-containing heterocycle which may be substituted and an oil soluble polymer. The coloring composition may also contain 1-1000 parts by weight of a high boiling point water-insoluble organic solvent. The coloring composition may further contain additives such as neutralizing agents, dispersion aids or dispersion stabilizers. The ink composition may further contain additives such as surfactants. Ishizuka et al. further teach an ink jet recording method comprising ejecting the above ink composition onto a recording medium. See paras. 0012-0022, paras. 0028-0054, para. 0088, para. 0092, dyes (IV-1) to (IV-5), paras. 0110-0114, para. 0247, paras. 0264-0272, para. 0328, paras. 0344-



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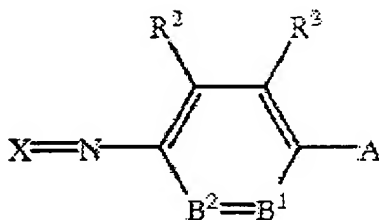
0347 and claims 1-4, 11, 13, 18, 19 and 20. Ishizuka et al. fails to specifically teach that the surfactant is a fluorinated surfactant as claimed by applicants.

Yatake et al. teach a similar ink jet ink composition comprising fluorine-containing surfactants such as fluoroalkyl esters and salts of perfluoroalkylcarboxylic acids. See para. 0258.

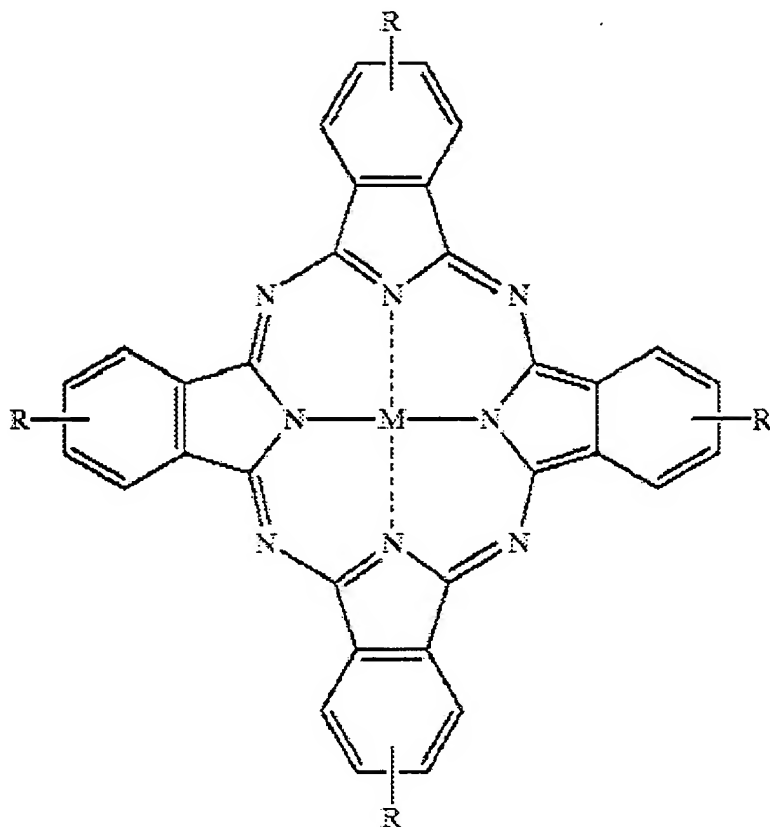
Therefore, it would have been obvious to one having ordinary skill in the art to have added the fluorine-containing surfactants of Yatake et al. to the ink jet ink composition of Ishizuka et al. as the surfactant component since Ishizuka et al. discloses that any surfactant may be added to the ink jet ink composition.

10. Claims 1-9 and 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yabuki et al. in view of Yatake et al. (US 2003/0106462).

Yabuki et al. teach an inkjet ink composition comprising a coloring composition containing oil soluble dye aggregates wherein the dye is of the formula



wherein A represents  $-NR^4R^5$  or a hydroxyl group;  $R^4$  and  $R^5$  each independently represent H, an aliphatic group, an aromatic group or a heterocyclic group;  $B^1$  represents  $=C(R^6)-$  or  $=N-$ ;  $B^2$  represents  $-C(R^7)=$  or  $-N=$ ;  $R^2$ ,  $R^3$ ,  $R^6$  and  $R^7$  each independently represent H, a halogen atom, H, an aliphatic group, an aromatic group, a heterocyclic group, etc or of the formula



wherein R is a substituted  $-\text{SO}_2\text{NH}$  group as disclosed that are dispersed in an aqueous medium. The aqueous medium comprises a mixture of water and a water-soluble organic solvent along with additives such as a surfactant, a wetting agent, a stabilizer and/or an antiseptic. The oil-soluble aggregates are formed by dissolving the above oil-soluble dye in a low boiling point organic solvent then a high boiling point organic solvent which can form aggregates is added to the solution. The coloring composition is formed by dispersing the coloring particulates, which contain the above oil-soluble dye aggregates and an oil-soluble polymer. The coloring composition may further contain additives such as neutralizing agents, dispersion aids or dispersion stabilizers. The ink composition may further contain additives such as surfactants.

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Yabuki et al. further teach an ink jet recording method comprising ejecting the above ink composition onto a recording medium. See col. 3, lines 45-65, col. 4, lines 1-25, col. 5, line 34 – col. 6, line 8, dyes D-1 to D-57, col. 23, lines 60-64, col. 24, lines 64-67, col. 31, lines 63-66, col. 33, lines 30-63, col. 34, lines 1-5 and 40-57, col. 48, lines 17-39, col. 49, line 64 – col. 50, line 7, col. 51, lines 24-32 and 47-51, Production Samples 1-13 and claims 1, 2, 4-12, 16 and 18-21. Yabuki et al. fails to specifically teach that the surfactant is a fluorinated surfactant as claimed by applicants.

Yatake et al. teach a similar ink jet ink composition comprising fluorine-containing surfactants such as fluoroalkyl esters and salts of perfluoroalkylcarboxylic acids. See para. 0258.

Therefore, it would have been obvious to one having ordinary skill in the art to have added the fluorine-containing surfactants of Yatake et al. to the ink jet ink composition of Yabuki et al. as the surfactant component since Ishizuka et al. discloses that any surfactant may be added to the ink jet ink composition.

### ***Conclusion***

The remaining references listed on forms 892 and 1449 have been reviewed by the examiner and are considered to be cumulative to or less material than the prior art references relied upon in the above rejections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helene Klemanski whose telephone number is (571) 272-1370. The examiner can normally be reached on Monday-Friday 5:30-2:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Helene Klemanski  
Primary Examiner  
Art Unit 1755



HK  
March 21, 2005